

REMARKS

By the above Amendment, previously withdrawn Claims 71-130 have been cancelled without prejudice or disclaimer. Thus the Claims now in the case are Claims 131-151.

Subject matter of withdrawn Claims 71-130 is being carried forward in continuing Application No. 12/480,021 filed June 8, 2009, containing 20 claims.

Entry of this Amendment and Response is requested on the ground that it places the case in condition for allowance or at least in better condition for appeal. Additionally, this Response affords the first opportunity for a Response on behalf of Applicants to be submitted to the Rejection of Claims 135-151 (Claims 131-134 embody subject matter of original Claims 61, 62, 64, and 65, which were covered by the Boards findings of fact and conclusions of law). As noted in the previous Response, Claims 135-151 had not received any Examination or Office Action from the Office. Thus, it would be inequitable and prejudicial to Applicants to refuse entry of this response since this would place Applicants in the position of having had no opportunity to respond to an Examination and a Rejection of Claims 135-151.

In the interest of brevity, the Remarks presented in the communication filed on June 8, 2009 are iterated here *in toto* by reference as it fully set forth herein.

We turn now more specifically to the Final Rejection mailed September 17, 2009.

Claim Rejections 35 U.S.C. § 103(a)

Claims 131-151 were rejected under 35 U.S.C. § 103(a) on Goodenough, et al (3,588,503, hereinafter “Goodenough”) in view of Dallmier, et al (5,683,654, hereinafter “Dallmier”) and the McKinnie declaration.

In explaining the Rejection, the Office Action fails to observe that neither Goodenough nor Dallmier uses bromine chloride as the source of bromine in any process. The facts are that Goodenough uses elemental bromine along with a bromine value stabilizer

and an amount of hydroxide additive sufficient to achieve a final pH ranging from about 8 to about 10. On the other hand, Dallmier uses the combination of (a) an alkali metal hypochlorite or an alkaline earth metal hypochlorite and (b) a bromide ion source selected from the group consisting of sodium bromide, potassium bromide, lithium bromide, and hydrogen bromide (column 5, lines 9-12) which are allowed to react to form an aqueous solution of unstabilized alkali metal hypobromite or unstabilized alkaline earth metal hypobromite, which is then stabilized with alkali metal sulfamate. Thus, neither the process of Goodenough nor that of Dallmier suggests the brominating agent required in the presently claimed invention.

Moreover, it is submitted that one skilled in the art would find no basis for combining the teachings of Dallmier with those of Goodenough. For example, Dallmier explicitly teaches against use of the very brominating agent used by Goodenough. For example, at column 2, lines 26-32, Dallmier states:

The Goodenough, et al. reference charges elemental bromine into aqueous solution prior to stabilization. Because elemental bromine is used in the process disclosed in the Goodenough, et al. reference, this process is difficult to complete as well as potentially hazardous since elemental bromine is a fuming, corrosive, toxic liquid.

It seems eminently clear from these and other passages from Dallmier, that one skilled in the art would not be led to select portions from one reference to add to the other. And even if this were done, the fact remains that there is nothing in the record to suggest use of bromine chloride as the bromine source.

There is still at least one additional factor which renders the rejection based on combining Dallmier with Goodenough. As Dallmier points out as column 6, lines 33-36 and at column 7 lines 51-52, the Dallmier order of addition is critical. Thus on four occasions in the text of Dallmier, the process is described by use of the following order of addition:

- a. mixing an aqueous solution of alkali or alkaline earth metal hypochlorite with a water soluble bromide ion source;
- b. allowing the bromide ion source and the alkali or alkaline earth metal hypochlorite to react to form an aqueous solution of unstabilized alkali or alkaline earth metal hypobromite;

c. adding to the unstabilized solution of alkali or alkaline earth metal hypobromite an aqueous solution of an alkali metal sulfamate having a temperature of at least 50°C in a specified ratio to produce a stabilized alkali or alkaline earth metal hypobromite solution; and

d. recovering stabilized alkali or alkaline earth metal hypobromite solution.

See column 3, line 59 to column 4, line 6; column 4, lines 13-28; column 4, line 57 to column 5, line 5; and column 6, lines 4-17. This “critical” order of addition is not suggestive of the order of addition specified in Applicants Claims 131-151, wherein the bromine values are stabilized from the very beginning. This distinction is very important since the Dallmier process must produce unstabilized alkali or alkaline earth metal hypobromite before it is stabilized. Otherwise, as the Dallmier reference itself points out, the Dallmier process would fail. More particularly, at column 2, lines 56-63, Dallmier makes this clear by stating “[s]ince NaOBr is synthesized by the following reaction, $\text{NaOCl} + \text{NaBr} \rightarrow \text{NaOBr} + \text{NaCl}$, addition of the stabilizer prior to bromide oxidation would not permit the formation of NaOBr.” Thus, Dallmier’s teachings require formation of unstabilized product prior to stabilization, a situation which is the antithesis of the process claimed in Applicants Claims 131-151.

There are still other patentable distinctions between the present claims and whatever might be made out of an attempt to combine Dallmier and Goodenough, despite the clear incompatibility between Dallmier and Goodenough and their irrelevance to the present claims. For example, the references do not suggest the continuous feeding into a mixing apparatus of (i) bromine and (ii) an aqueous solution of an alkali metal salt of sulfamic acid having a pH of at least about 12, and the withdrawing of product from the mixing apparatus at a rate sufficient to enable such continuous feeding to be maintained as specified in A) and B) of Claim 135 and the additional features combined therewith as set forth in Claims 136-141 depending from Claim 135. Nor do the references suggest the additional feature set forth in C) of Claim 142 of continuously, but alternately, withdrawing from at least one and then from at least one other of at least two reaction vessels, an aqueous solution of alkali metal salt of sulfamic acid at a rate that maintains a continuous stream of aqueous solution of alkali metal salt of sulfamic acid having a pH of at least about 12, and during the time the solution is being withdrawn from said at least one of at least two reaction vessels, forming additional aqueous

solution of alkali metal salt of sulfamic acid in said at least one other of at least two reaction vessels from which solution is not then being withdrawn. Note also the additional features combined with these novel features of Claim 142, which additional features are set forth in Claims 143-151 depending from Claim 142. Clearly therefore, there are still additional reasons why Claims 135-151 are entitled to allowance.

It is noted that in the Office Action it is suggested that at artisan would have been motivated to combine the teachings of Goodenough and Dallmier to include a step of increasing the pH of the final solution to 12-14 as indicated in Dallmier in order to minimize formation of the suspected carcinogen bromate during storage, has not escaped our attention. However, that result of the combination is not what is presently claimed, since Applicants Claims involve no step of increasing the pH of a final solution. Indeed, Applicants Claims specify something entirely different from this. The present claims provide a substantially uniform pH of about 12 to about 14 throughout the process, a feature which cannot be derived from either Goodenough or Dallmier.

On the basis of the foregoing comments, it is believed clear that the Rejection based on Goodenough and Dallmier and the McKinnie Declaration is inapplicable and untenable. Accordingly, reconsideration and withdrawal of the rejection are respectfully solicited.

If matters remain requiring further consideration, the Examiner is respectfully requested to telephone the undersigned so that such matters may be discussed and, if possible, can be promptly resolved.

Please continue to address all correspondence in this Application to Albemarle Corporation, at their address of record.

Respectfully submitted,
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